WE CLAIM:

1. A method of providing direct access to a voice mail system (VMS) hosting a voice mail box associated with a service subscriber, the method comprising steps of:

formulating a call set-up message for initiating the establishment of a call connection to the VMS, the call set-up message having a format reserved for a redirected call set-up message issued by a service switching point (SSP) in response to an uncompleted call to the service subscriber; and

issuing the call setup message into a common channel signaling (CCS) network to initiate the establishment of the call connection directly to the voice mail box of the service subscriber.

2. A method as claimed in claim 1 wherein the CCS network uses signaling system 7 (SS7) protocol, and the step of formulating a call set-up message further comprises steps of:

instantiating an integrated users digital network-user part (ISUP) initial address message (IAM);

inserting a directory number (DN) of the VMS into a called party number parameter in the IAM; and

inserting a redirecting number parameter, an original called number parameter, and a redirection information parameter into the IAM, in conformance with a SS7 standard.

3. A method as claimed in claim 2 wherein the step of inserting comprises a step of inserting the service

subscriber's DN into the original called number and the redirecting number parameters, in conformance with the SS7 standard.

4. A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into a redirection information parameter, the reason code being used by the VMS to select a voice mail prompt to play to the calling party.

5. A method as claimed in claim 2 wherein the step of inserting further comprises a step of inserting a redirecting reason code into the redirection information parameter, the reason code being a default value indicating that the reason for redirection is unknown or not available.

6. A method of providing direct access to a voice mail box of a service subscriber to a voice mail system (VMS), the method comprising steps of:

    receiving at a call control application, a message
        sent in response to a request for direct access
        to the voice mail box by a requesting party;

    formulating a call setup message for initiating
        establishment of a call connection between the
        requesting party and the VMS, the call setup
        message having a format reserved for a redirected
        call setup message issued by a service switching
        point (SSP) in response to an uncompleted call to
        the service subscriber; and

sending the call set-up message into the CCS network to initiate the establishment of the call connection.

7. A method as claimed in claim 6 wherein the CCS network uses signaling system 7 (SS7) protocols, and the step of formulating a call setup message further comprises steps of:

instantiating a default integrated users digital network-user part (ISUP) initial address message (IAM);

inserting a directory number (DN) of the VMS's into a called party number parameter of the IAM; and

inserting a redirecting number parameter and an original called number parameter in the IAM, in conformance with a SS7 standard.

8. A method as claimed in claim 7 wherein the step of inserting comprises a step of inserting a DN of the service subscriber into the original called number and redirecting number parameters, in conformance with the SS7 standard.

9. A method as claimed in claim 8 further comprising a step of inserting a redirecting reason code into a redirection information parameter, the redirecting reason code identifying the IAM as a request to leave a voice message with a direct to voice mail call.

10. A method as claimed in claim 8 further comprising a step of inserting a default value redirecting reason code into the redirection information parameter.

11. A method as claimed in claim 8 wherein the step of receiving the message comprises steps of:

receiving a connection request message; and

inspecting the connection request message to remove three identifiers; a requesting party identifier, a service subscriber identifier, and a VMS identifier.

12. A method as claimed in claim 11 wherein the step of receiving a connection request message comprises a step of receiving over an Internet protocol (IP) connection, from a server on the Internet adapted to receive click-to-voice mail notifications from at least one worldwide web page, a connection request message that conforms to a predefined format and includes directory numbers for the requesting party, service subscriber and VMS.

13. A method as claimed in claim 12 further comprising steps of:

initiating an establishment of a call connection between the requesting party's DN and a virtual instance of a call control node (CCN) prior to the step of sending; and

effecting an extension of the call connection from the virtual instance of the CCN to the VMS with the step of sending.

14. A method as claimed in claim 11 wherein the step of receiving comprises a step receiving a reconnect request message from call termination equipment, the reconnect connect message including a DN of the call

termination equipment, a DN of the requesting party, a DN of the service subscriber and a DN of the VMS.

15. A method as claimed in claim 14 further comprising steps of:

effecting a forward release of a part of the established call connection between a virtual instance of the CCN and the call termination equipment; and

initiating an establishment of an extension the established call connection from the virtual instance of the CCN to the VMS with the step of sending.

16. A system for enabling a requesting party to initiate a telephone call directly to a voice mail box associated with a service subscriber to a voice mail system (VMS), comprising:

a call control node configured as a virtual service switching point in a switched telephone network, the call control node being adapted to receive a message requesting setup of a direct call to a voice mail box, and to respond to the message by formulating a call set-up message to initiate establishment of a call connection to the VMS, the call set-up message having a format reserved for redirected call set-up messages used by service switching points (SSPs) to redirect uncompleted calls to the service subscriber, so that the VMS provides access to the voice mail box.

17. A system as claimed in claim 16 wherein the call control node comprises an interface to a common channel signaling (CCS) network that operates under a signaling system 7 (SS7) protocol, and the call set-up message is an integrated services digital network-user part (ISUP) initial advisory message (IAM).

18. A system as claimed in claim 17 wherein the call control node further comprises:

    means for formulating an IAM;

    means for inserting a directory number (DN) of the VMS into a called party number parameter of the IAM, in conformance with a SS7 standard; and

    means for inserting an original called number parameter, a redirecting number parameter and a redirection information parameter into the IAM, the redirecting number parameter containing a DN of the service subscriber, in conformance with the SS7 standard.

19. A system as claimed in claim 18 wherein the call control node further comprises means for inserting a redirecting reason code into the redirection information parameter.

20. A system as claimed in claim 19 wherein the call control node comprises a call control application (CCA) adapted to control the call control node (CCN), and the CCA is further adapted to receive the message requesting the establishment of the direct call to the voice mail box.

21. A system as claimed in claim 20 wherein the CCN is a virtual switching point in the call connection, and the connection request message is a reconnect request message from call termination equipment, and the reconnect request message contains a DN of the call termination equipment, a DN of the requesting party, a DN of the service subscriber, and a DN of the VMS.

22. A system as claimed in claim 21 further comprising a directory service database adapted to supply the call termination equipment with the DN of the VMS, and the DN of the service subscriber.

23. A system as claimed in claim 22 wherein the directory service database is further adapted to supply the call termination equipment with a redirecting reason code in response to a query.

24. A system as claimed in claim 21 wherein the CCA is further adapted to receive the reconnect request message, and to initiate a release by the CCN of a part of the established call connection between a virtual instance of the CCN and the telephony equipment, and to initiate an extension of the established call connection by the CCN between the virtual instance of the CCN and the VMS using the IAM.

25. A system as claimed in claim 20 further comprising an worldwide web server adapted to receive click-to-voice mail notifications from at least one web page and to relay a connection request message to the CCA, conforming to a predefined format.

26. A system as claimed in claim 25 wherein the connection request message is relayed through a proxy server.

27. A system as claimed in claim 25 wherein the connection request message contains the DNs of the requesting party, service subscriber and VMS.

28. A system as claimed in claim 21 further comprising a database adapted to supply the proxy server with the DN of the VMS, the DN of the service subscriber in response to a query.

29. A system as claimed in claim 28 wherein the database is further adapted to supply the proxy server with and a redirecting reason code in response to the query.

30. A system for providing a directory service with a direct to voice mail option for voice mail system (VMS) service subscribers, comprising:

a directory service that permits a requesting party to communicate an identifier used to locate a directory record associated with the VMS service subscriber, the directory service being adapted to provide the requesting party with an option to be connected directly to the VMS service subscriber's voice mail box after the record is located; and

means for formulating a common channel signaling initial address message (IAM) containing a redirecting number parameter to connect the

requesting party directly to the voice mail box of the VMS service subscriber.

31. The system as claimed in claim 30 wherein the directory service is instantiated on call termination equipment adapted to receive dial-up connections from the public switched telephone network (PSTN) and to interact with the requesting party.

32. The system as claimed in claim 31 wherein the directory service is a directory service application is instantiated on a worldwide web server adapted to interact with the requesting party through the Internet.

33. The system as claimed in claim 30 wherein the means for formulating a common channel signaling initial address message (IAM) is a call control node (CCN) that is configured as a virtual switching point in the public switched telephone network (PSTN) and a physical node in a common channel signaling network of the PSTN.

34. The system as claimed in claim 33 wherein the CCN comprises a call control application (CCA) that is adapted to interface with an Internet Protocol (IP) network, and further adapted to provide control functions to the CCN.

35. A system for providing a click to voice mail option accessed from a server on an internet protocol (IP) network, comprising:

a user interface for permitting a requesting party to select the click to voice mail option, the click to voicemail option being associated with a particular voice mail box of a voice mail system (VMS) subscriber;

means for forwarding a message requesting setup of a connection directly to the voice mail box; and

means for receiving the message and formulating a common channel signaling system initial address message (IAM) containing a directory number of the VMS inserted in a called party number parameter of the IAM and a directory number of the VMS service subscriber inserted in the redirecting number parameter of the IAM.

36. A system as claimed in claim 35 wherein the means for receiving the message comprises a call control node (CCN) adapted to receive messages from the IP network, and to formulate and send the IAM into the common channel signaling network.

37. A system as claimed in claim 36 wherein the CCN is configured as a physical node in the common channel signaling network and as a virtual switching point in a switched telephone network associated with the common channel signaling network.

38. A system as claimed in claim 35 wherein the user interface is provided by one of a worldwide web page and an electronic mail message.

39.   A system as claimed in claim 38 wherein the means for forwarding comprises the worldwide web server.

40.   A system as claimed in claim 38 wherein the means for forwarding comprises a proxy server that receives the message requesting setup of a connection directly to the voice mail box and forwards the message to a call control node adapted to receive messages from the IP network.